GC/MS Data Auditing Check Sheet

Laboratory Name: _____ Audit Date(s): _____

Method: _____ Surveyor:_____ Rev. 3, 8/05

Hard Copy Data Review	Yes	No	Comments
Proficiency Samples:			
1. Report date:			
2. PE successful?			
Calibration:			
1. Standard Information			
-Analysis date:			
-Analyst:			
-Instrument ID:			
-Software type:			
-File names:			
2. Quantitation Report and Chromatogram Review			
-Does the lab have adequate hard copy data?			
-Are all standards run the same day/batch? (Check Acquired Times)			
-Is the method update time the same for each?			
-Is the chromatogram info the same as the quant. reports (i.e. same file names, acquisition times, method update times, print time)?			
-Is the chromatogram printed using a scale that is visible?			
-Do the standards have the proper sensitivity?			
-Do the standard peaks have acceptable separation?			
-No significant contamination?			

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	-If any sample is found positive for phthalates, did the lab analyze a trip blank to show that samples were not contaminated with phthalates from the bottle caps, the HCL if used for preservation or the latex gloves worn during sampling? (IU#29, paragraph#4 for 525.2)			
	-Are the peaks properly ID'd (at least two ions used)?			
	-Do the peak responses on the quant. reports match those of the calibration summary report (hand calculate a few-especially manual integrations)?			
	-Do the calibration levels support the laboratory's reporting levels (check cal. level vs. final report of sample vs. MDLs)?			
	-Were sample dilutions applied to calculations correctly?			
	-Are reference spectra correct compared to NIST?			
3.	Calibration Method Information			
	-Were an adequate number of calibration standards used based on the calibration range and/or calibration model used?			
	-Quantitation method file name:			
	-Calibration type (i.e. linear, RF, etc.):			
	-Same for all compounds?			
	-Was the calibration criteria met for each compound (i.e. RSDs)?			
	-"force thru the origin"?			
	-Were data points eliminated from the calibration?			
	-If yes, why?:			
	-Was this done appropriately?			
	-Were internal standards properly assigned?			

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-Was the calibration standard validated by a secondary source standard?			
-Was the run time appropriate, i.e., 35-45 min?			
Attach photo copy documentation of any areas of concern			
Sample Information:			
-Sample date/time(from COC):			
-Were the samples properly preserved?			
-Were preservation checks documented?			
Final Report Information:			
-Does the final report have the Arizona license noted?			
-Is the report signed by the laboratory director or designee?			
-Does the lab report show all flags for failed QC?			
Sample Preparation Procedures:			
-Extraction method:			
-Extraction date/time:			
-Did the sample meet the extraction hold time?			
-Is the extraction documentation correct and complete?			
-Was the extraction acceptable (refer to check sheets or hand notes)?			
-Was sample cleanup performed?			
Attach photo copy documentation of any areas of concern			
Sample Analysis:			
-Sample ID:			

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-Analysis date/time:			
-Was the sample hold time met?			
-Was the proper QC run with the sample batch?			
-Was the QC at the proper concentrations?			
-Was the appropriate QC (including MS tune and GC performance checks) criteria met? If not, was it properly documented?			
-Was the background subtracted appropriately?			
-Do all low level QC checks have adequate sensitivity?			
-Does the hard copy data correspond to the sequence report?			
-Are there any major breaks in the acquisition times?			
-Do all the samples/QC in the batch have the same method update time?			
-Do all chromatograms have corresponding information to the respective Quant Report (i.e. same file names, acquisition times, method update times, same RTs, print time)?			
-Are the response factors of the samples the same as from the calibration (calculate a few)?			
-Are the chromatograms printed using a scale that is visible?			
-Do all samples/QC in the batch have adequate peak separation?			
-No significant contamination or matrix interference?			
-Are the peaks properly ID'd (at least two ions used)?			
-Are all the peaks integrations appropriate and			

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consistent?			
-Do the analytical results on the Quant Report match those on the final report?			
-If 2-chloroethylvinyl ether was reported to client, was an unacidified vial used for analysis?			
-Were the required number of internal and/or surrogate compounds analyzed? If so were the required compounds used?			
-Did internal standard and/or surrogate areas meet the appropriate QC criteria?			
-Were all QC requirements regarding retention times met?			
-Can the reported values be verified by calculation			
-If in-house limits are used, are they available for review?			
-Was the run time appropriate, i.e., 35-45 min?			
Attach photo copy documentation of any areas of concern			
Laboratory Review	Yes	No	Comments
-Was the analyst(s) available for interviewing?			
-Did the analyst(s) provide adequate response to the concerns found from the hard copy data review?			
-Was the analyst(s) following proper procedure? -If no, see notes or check sheets. -If no, is SOP correct? -If no, is the QAP correct?			
-Did the lab have the proper equipment and			

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instrumentation?			
-Did the lab have the proper reagents?			
-Did the lab have adequate documentation such as run logs, maintenance logs, temperature logs and standard logs?			
-If major instrument maintenance was performed, i.e., changing and replacing column, MS source, changing repeller, lens, electron multiplier, injector port, was an initial calibration and MDL study performed immediately afterwards?			
-Were samples and standards stored within required temperature ranges, i.e. -10^0 or less for methanol standard solutions?			
-Were samples, extracts stored separately from standards?			
-Was Class A volumetric glassware used to measure stock standard solutions, aqueous samples and extracts?			
-Was a properly calibrated balance checked with weights that encompassed the measured weight used to weigh solid samples?			
Electronic Data Review:	Yes	No	Comments
1. Mint Miner Review (If Applicable) -Are any problems identified?			
In-Lab Review:			
2. High and low standard			
-Does the low standard have acceptable sensitivity			
-Do all compound peaks have adequate separation?			
-Do all compound peaks have appropriate and			

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consistent integration?			
3. Initial CCV			
-Do all the peaks have adequate sensitivity?			
-Do all the peaks have adequate separation?			
-Do all the peaks have appropriate and consistent integration?			
-Can the laboratory reprint a Quant Report and chromatogram that matches the hard copy?			
-If yes, Attach.			
-If no, why?			
4. Other electronic data concerns (Identified in the hard copy review):			
Attach photo copy documentation of any areas of concern			
Training: -If significant problems are noted above, do the analyst's training files show that they were properly trained?			